



Human_p53	PL--SSS[VPSQKTYQGSYGERE	CTYSPALNKMECQ	AKTCPVQLWVD
Xeno_p53	--SCAVPSTDYAGKYGLQ	TCPEAKTCPE	DFQQ-NGTAKSV
Squid_p53	VQSPQ[VPSN	TCVPRMATTCP	DFAQPSKETKS
CPB_p53	--VQ[TSPN	WTYSEKLDKLY	DFRVS
TrkB_p53A	--DQPTNLGTEY	TYSTTILNKEE	SPF
TrkB_p53B	--SEPLELCNT	SEKILNKEE	PV
Helio_p53	--	YEDMILNKEE	AFS
Dros_p53	QIQA[NTPKLENHNN	YEDMILNKEE	SVQ
consensus	GYCESSV	YEDMILNKEE	SV

FIG. 1A



Human\_p53 STPP - PGTRV RAMATEY KQSQHM TENV RCP HERCS D --- S D GLAPPQH I RVEGNL R  
 Xeno\_p53 SPP - RGS I ERATAV YKKSEHV A E M V KRC P H ERSVEP - --- G E DAAPP SH M R V  
 Squid\_p53 RPP - SGCQ I TRAMP E YKPEHV QEV V KRC P N H A TAKEH - --- N E K H P APLH I V RCEHKL -  
 CPB\_p53 HRP - NPL E T RSTP V Y SAPQFA Q E C V Y R C E H F S H K E S - D G D L K E H T R P H I R C A  
 Trrib\_p53 HRP - NPL E T RATP V E S Q T Q E F Q D E V H R C V G H R H P Q D Q S - N K G V A P H I F Q H I R C T  
 Trrib\_p53 NRPNLPL Y RVM P M E E D R Y V Q E T V H R C T C H E Q L T D P T - N H N V S E M V A Q H I R C D N N A  
 Helio\_p53 YQKA - PHM E V R S T V V E S D E T Q A E K R V E R C V Q H F H E S S T S G I Q T E I A K N V L H S S R E I G T Q G  
 Dros\_p53 SKM P T Q P H N E V R F L C E S N D - V S A P V V R C Q N H L S V E P L T - - A N N A K M R E S T E R S E N P N S  
 cons\_nsus pp 1 f v r a t p v y s  
 h v q e v v R C l n n e s d  
 1 h i r c e n n a

Human_p53	VEYLDDDRNT	FRH	SVVVPPYE	P	PEVGSDCTT	GMNRRPILTI
X_no_p53	AYYMEDDVNS	GRH	SVCPYEG	-	PQVCTT	GMNRRPILTI
Squid_p53	AKYHEDKYS	GRQ	SVHEM	-	PQAGSE	GMNRRPILTI
CPB_p53	AYIIGDKSKN	ERL	SVVFGI	-	PQTGTE	GMNRRPILTI
Trrib_p53A	LYEGDKNTG	TRLN	EVVPLAH	-	PQVGED	GMNRRPILTI
Trrib_p53B	QYEGDKNAG	KRLS	-	-	-	-
H110_p53	VYCCGKVDM	-	ADSWYSVLVEF	-	MRTSSSE	GMNRRPILTI
Dros_p53	VYCGNAQGKGISERF	-	SVVVPLNMSRSVTRSGLT	-	SCNNSCAT	GMNRRPILTI
consensus	VYGGDK	-	SVVVPLNMSRSVTRSGLT	-	SCNNSCAT	GMNRRPILTI

FIG. 1B



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Human_p53	ITLEDSSGNEGRNSEEVRYCACPGDRRT	EE-NLRKG	---EPHHELPPGSTKRALP
Xeno_p53	ITLET[PQGL]EGRCEVRYCACPGDRRT	ED-NYTK	---RGLKPSG---KRELA
Squid_p53	FTLEK-DNQVIEGRNAYEVRTCACPGDRK	ERASLVS	---PPSPKKNGFPORSLV
CPB_p53	FTLEDNQGTYGRKTEVNRFCSCP	KDTANT	---NLPHG-KKRKME
Trib_p53A	FTLEDNKGEVFGRRV	CSCP	---VPPRKKRKLG
Trib_p53B			
Helio_p53	FTLEDAMGNT[HGRQK]V[GAR		
Dros_p53	ECLEKACGDI[VQHVI]HV[RE]CTCPK	ERQDEROLNSK	---KRSVPEAAEDEPSKVRCTA
consensus	ftled g 11grr v vrvc cp rdr	eeek	pg kr 1

Human_p53	NNTSSSP-QPKR	---KPLDGEYFT	QIRGREREMFRE	---TNEAELKDAQAG	---
Xeno_p53	HPPSSEPPLPKKR	RLVVDDDE	EEITFTRKGRSRX	EEITFTRKGRSRX	---
Squid_p53	LTNDITKITPKR	---RKIDDECFT	EEITFTRKGRENY	EEITFTRKGRENY	---
CPB_p53	KPSKKPMQTQAE	---NDTKE	EEITFTRKGRENEQ	EEITFTRKGRENEQ	---
Trib_p53A	NDERRVVPQGSS	---DNKTFALN	EEITFTRKGRENEQ	EEITFTRKGRENEQ	---
Trib_p53B		TIKTEDTESNDS	EEITFTRKGRENEQ	EEITFTRKGRENEQ	---
Helio_p53		DCDDDSAA	EEITFTRKGRENEQ	EEITFTRKGRENEQ	---
Dros_p53	IKTEDTESNDS	EEITFTRKGRENEQ	EEITFTRKGRENEQ	EEITFTRKGRENEQ	---
consensus		EEITFTRKGRENEQ	EEITFTRKGRENEQ	EEITFTRKGRENEQ	---

Human_p53	-KEPGG	---SRAHSSEHLRSKKGQ	---	---STSRRKKRMEKTEGP	---
Xeno_p53	-KVTIK	---CRKCRDEIKPKKG	---	---KKEVDEQPDSE	---
Squid_p53	RQAPIGRLTSLPPSSSSNGSQDGS	SSSTAFTSDSSQVNNSQNN	---	---KNTLIRESE	---
CPB_p53	IG	---	---	EEITVLLNGTAAFD	---
Trib_p53A	EQ	---	---		---
Trib_p53B					---
Helio_p53					---
Dros_p53	-EAAEVILRNPNQENLRRHAN	---	-KLEISETKKRAYELP	---	---
consensus	g		Inv d		

FIG. 1C



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Human\_p53  
X\_no\_p53  
Squid\_p53  
CPB\_p53  
Trib\_p53A  
Trib\_p53B  
H\_llo\_p53  
Dros\_p53  
consensus

KCEPENTIAQWLTKLGLQAYIDNFQQKGLHNMFQLDEFTLEDLQSMRIGTGHRNKKIWK5

Human\_p53  
Xeno\_p53  
Squid\_p53  
CPB\_p53  
Trib\_p53A  
Trib\_p53B  
Heliio\_p53  
Dros\_p53  
consensus

LLDYRRLISSGTESQALQHAASNASTLSVGSQNSYCPGFYEVTRYKHTISYLL

**FIG.\_1D**